

## SECTION IV.—RIVERS AND FLOODS.

## RIVERS AND FLOODS, JANUARY, 1915.

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[Dated: Washington, D. C., Mar. 3, 1915.]

*Georgia and the Carolinas.*—There were three periods, each exceeding 24 hours, of steady, but not especially heavy rainfall, over the South Atlantic States during the month. The first period occurred between the 5th and the 7th, although the great part of the rain fell on the 6th. The second period occurred on the 12th to 13th and was the shortest of the three. Had the rivers been at a lower stage in the beginning it is doubtful whether flood stages would have been reached. The third period included the 17th and 18th, with the heaviest rain in Georgia on the 17th. This latter period was one of very general rains continuing practically 48 hours over Georgia and the Carolinas.

As a result of the rains the rivers were at relatively high stages throughout the month, with flood or freshet stages about the 8th, 13th, 19th, and other dates.

*Alabama.*—The Tennessee River in northern Alabama was above the flood stage on the 1st and 2d, but no damage resulted. The lower Tombigbee of Alabama was above the flood stage at Demopolis, Ala., on the 3d and again on the 24th and 25th. About 15 square miles of bottom land was overflowed.

*Virginia, Maryland, and Pennsylvania.*—The rain period of the 5th to 7th, as mentioned above, extended into the Middle Atlantic States on the 7th and caused the ice to break up in the Susquehanna River. Fortunately it passed out on stages somewhat below the flood level.

The rains of the 12th and 13th were unusually heavy over the watershed of the Schuylkill River in southeastern Pennsylvania and caused a very rapid rise in that stream on the 13th, the rise quickly subsiding.

*Arizona.*—Following the general heavy rains of the 28th to 30th, freshet conditions developed rapidly in the streams of the southern half of Arizona. In the Salt River and its tributaries considerably higher stages resulted than occurred in the freshets of December, 1914. By the morning of the 31st the crest of the rise had passed into the Gila River, below the mouth of the Salt.

Practically all of the floods were forecast, and in general but little preventable damage was sustained.

## Statistics of flood loss during January, 1915.

State.	Tangible property.	Crops (gathered, and live stock.	Crops (prospective).	Suspension of business.	Saved by warnings, (estimated amount.)
South Carolina.....	\$1,325	\$1,605	\$12,500	\$9,690	\$55,400
North Carolina.....				5,000	15,000
Alabama.....					3,300

## SNOWFALL AT HIGH ALTITUDES, JANUARY, 1915.

[As summarized from the reports of Section Directors.]

*Arizona.*—Throughout January there was but little addition to the snow in the mountain districts until the last decade of the month. The excessive precipitation of the 28th and 29th occurred mostly in the form of snow

over the northern plateaus and ranges, at the higher levels of the central mountain districts, and over the east-central ranges, as far south as the Blue Mountains. In the more southerly ranges of the southeast, even at extreme elevations in some sections, the storm set in with rain, melting all, or a considerable part of the snow then remaining, and ended with snowfall insufficient in depth in most localities to reach the average for the season in past years.

Observers in nearly all sections particularly mention, in connection with their reports upon snow conditions, the prospect for an abundant water supply for agricultural and grazing purposes during the spring and early summer.—*Robt. R. Briggs, Section Director.*

*California.*—The snowfall in California during January, 1915, was considerably below the normal in most portions of the Sierra Nevada Mountains, only slightly below in the Siskiyou, and somewhat above normal in the mountains of southern California. The snow-covered area of the State was large at the beginning of the month, and, while January was decidedly stormy with heavy precipitation, the snow fields were greatly reduced by the rains which extended well into the mountains and melted the snow generally below the 3,000-foot level.—*G. H. Willson, District Forecaster.*

*Colorado.*—In common with the three preceding months, the snowfall during January was less than normal on all watersheds, the slight excesses occurring here and there at moderate elevations failing to offset marked deficiencies near the Continental Divide. The relatively scanty snow covering has permitted deep freezing. It follows that when melting sets in the runoff will be direct and rapid, and that the midsummer flow will be small, unless showers in the mountains make up the deficit.

The depths at the end of January and on the corresponding date a year ago, respectively, were:

TABLE 1.—Snow on ground over Colorado, January, 1914 and 1915.

Watershed.	1915	1914
	Inches.	Inches.
South Platte.....	6	23
North Platte.....	10	23
Arkansas.....	11	21
Rio Grande.....	16	24
Grand.....	15	36
Gunnison.....	18	41
Yampa and White.....	14	33
San Juan and southwestern watersheds.....	23	35

—*F. H. Brandenburg, District Forecaster.*

*Idaho.*—The month of January opened with a marked deficiency in the supply of snow in the mountains of Idaho, except in the Panhandle. The precipitation of the month was almost everywhere below normal. Most of the precipitation occurring in the early days of the month was in the form of snow, and measurements made on the 15th showed a considerable increase in depth. During the last week of the month there were a few days of abnormally high temperature, with warm winds and some rain, even in the higher mountains. These conditions materially reduced the depth of snow, but increased its density. While the conditions at the close of the